C320 Integrated Amplifier

Date of manufacture : July 98 - Current

Please note that this document contains the text from the original product brochure, and some technical statements may now be out of date

- 2 x 40 Watts continuous into 8ohms
- 90 Watts dynamic power into 8ohms
- 160 Watts dynamic power into 2ohms
- Impedance Sensing Circuitry (ISC)
- Full system remote control
- Headphones socket
- Relay input switching
- Toroid power transformer
- 7 Line inputs, including two tape in/outs
- All discrete circuitry
- Short signal path from input to output
- All sockets gold plated
- Tone controls defeat switch
- Pre-out / Main-in
- Soft Clipping
- NAD Link

Introducing the C320. This amplifier is the latest in the family of NAD's modestly priced integrated amplifiers which stretch back to the legendary 3020. One step up from the splendid 310, the C320 is fully remote controlled with the NAD C Series system controller and is destined to become yet another NAD classic.

Features

The C320 has 7 line inputs (including 2 tape in/outputs with dubbing facility) and the pre-amplifier section can be separated from the power amplifier for easy upgrades (bi-amping, for instance) or adding ancillary equipment without making the C320 redundant.
Tone controls tend to come and go on amplifiers, depending on whatever is in vogue at the time. This does not mean that tone controls should necessarily be regarded as a superfluous extra. Given proper thought and design, tone controls can make a genuine contribution to overall sound quality. The C320 tone controls only work at the frequency extremes leaving the critical mid-band essentially unaltered. The tone control circuits can be completely bypassed by using the tone defeat switch.

A closer look at ISC

The NAD C320 is one of the first products to benefit from Bjørn Erik Edvardsen's latest development. ISC topology - the letters stand for Impedance Sensing Circuit - allows the C320 to deliver maximum performance under virtually any circumstance, independent of the loudspeakers it is driving. The circuitry automatically recognises the impedance characteristics of the loudspeaker and will then adjust its power supply settings to best cope with that specific load.
NAD takes a stand against the mindless "brochure power" approach which doesn't give a realistic indication of an amplifier's true capabilities. Instead, the ISC topology is a practical approach to enable an amplifier to easily deal with dynamics and difficult loads. More meaningful are the C320's dynamic capabilities; up to 160 Watts into 2 ohms and up to 35 amps current capability!

All the traditional and essentially useful NAD features are here, such as Soft Clipping (helps prevent your speakers from damage through abuse!) and Pre-out/Main-in for extra flexibility and to provide an easy upgrade path for example. Like all the other in- and output sockets, the Pre-out/Main-in sockets are gold plated for long-term contact reliability.

As the C320 also has NAD Link the remote control will also operate many other NAD products such as CD players, tuners etc.

Other design features include relay input switching (located right behind the input sockets for short signal paths) and the large toroidal transformer (less mechanical hum and stray magnetic field). The generous power supply and over-rated output devices further lead to low noise and low distortion for the entire amplifier.
The C320 does it all at a price that will astound you.

PRE-AMP SECTION

Line level inputs		
Input impedance *(R and C)*		20kΩ / 500pF
Input sensitivity *(ref. 1W)*		165mV
Frequency response		20Hz - 20kHz / ±0.3dB
Line level outputs		
Output impedance	Pre-out	220Ω
	Tape	Source Z + 2kΩ
	Video	220Ω
Tone controls		
Treble		±5dB at 10kHz
Bass		±7dB at 100Hz

POWER AMP SECTION

Continuous output power into 8Ω *		40W (16dBW)
Rated distortion *(THD 20Hz - 20kHz)*		0.03%
Clipping power *(maximum continuous power per channel)*		55W
IHF Dynamic headroom at 8Ω		+3.5dB
IHF dynamic power *(maximum short term power per channel)*	8Ω	90W (19.5dBW)
	4Ω	125W (21dBW)
	2Ω	160W (22dBW)
Damping factor *(ref. 8Ω, 50Hz)*		>60
Signal/noise ratio	ref. 1W	90dB
	ref. rated power	104dB
Remote		Yes
NAD Link		Yes

PHYSICAL SPECIFICATIONS

Dimensions (W x H x D)	435 x 100 x 290mm
Net weight	6.5kg
Shipping weight	7.7kg

* Minimum power per chnnel, 20Hz - 20kHz, both channels driven with no more than rated distiortion.

Dimensions are of unit's cabinet without attached feet; add up to 18mm for total height.

Dimension depth excludes terminals, sockets, controls and buttons.

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